President TL-174-09

* 3308 East Chapet Hill/Nelson Highway Post Office Box 12652

Research Triangle Park, NC 27709

5770

Mead CompuChem

Biephone: 919-549-8263 800-334-8525

July 8, 1983

RECEIVED OCT 2 5 1983

Dr. Alfred Haeberer
USEPA
Support Services Branch (WH-548-A)
Hazardous Response Support Division
401 M Street, S.W.
Washington, D.C. 20460

Dear Fred:

The new protocols for semi-volatile analysis are currently not amenable to running samples on a routine basis (IFB WA 83 A094, Contract 68-01-6762). In order to prevent buildup of delinquent samples, I have decided to revert to the calibration protocols of the previous contract on a 3-week interim basis (IFB WA 82 A155, Contract 68-01-6727). The changed surrogate and deliverable items of the new protocols will be followed. I will provide you detailed technical information documenting all problems with the new protocols within the next 10 days.

I believe this change is in the best interest of the program. However, if this is unacceptable to you, please call immediately.

Sincerely.

R. Lee Myers, Ph.D.

RLM:eh

EC: S. Kovell

Dick Thacker - SMO Gareth Pearson - EMSL

QUALITY ASSURANCE NOTICE: EPA CASE!

In addition to the difficulties experienced in the analysis of semi-volatile calibration standards referenced in the attached memorandum from Dr. R. L. Myers at CompuChem to Dr. A. Haeberer, USEPA, 7/8/83, similar problems have been seen in the initial volatile calibration analyses. The Laboratory is, consistent with the semivolatiles, reverting to the calibration protocols of the previous contract for volatiles, until the criteria problems can be overcome or the criteria themselves are changed for this contract.

and They

Director, Quality Assurance July 2pt, 1983

The semivolatile calibration standards criteria being applied by CompuChem for Calibration Check Compounds is that the shift check standard must have for those compounds a response factor which is within the 20% difference criterion compared to the multipoint calibration standard of the same level. Again, the old protocol criteria is being applied, in which the average of the response factor differences are summed, so some individual standards response factor may be outside the 20% criteria, but the average of all may be less than 20%; this would be acceptable, and then samples would be run.

Director, Quality Assurance July 22, 1983

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The following Quality Assurance Notices apply to Case #1887:

QUALITY ASSURANCE NOTICE

Semivolatile blank #6078 was injected directly after a sample containing high levels of pentachlorophenol. The blank had this compound in it at 960 ug/kg. Because this was suspected as column carryover, an attempt was made to reinject the blank, however, the base/neutral fraction had evaporated from the vial. This fraction was reconstituted and combined with the acid fraction for analysis on GC/MS. The results indicated that pentachlorophenol was indeed carryover, since the sample was BDL for all priority pollutants. We are reporting the original blank data with reference to this notice; also included is the RIC of the reinjected blank to verify the BDL results.

Bob Whitehead Quality Assurance Specialist

QUALITY ASSURANCE NOTICE

The semivolatile fraction of sample spike # 5824 and duplicate spike # 5825 exhibited unusual percent recovery values for the compound(s) listed below. These values are outside of control limits due to the non-homogenous nature of the soil sample used in preparing these spikes. This original sample (# 5802) contained the compound(s) listed below in the "non-spiked" analysis.

compound	
1,2,4-tricklorsberzene	-

Bob Whitehead WW 9-25-67 Quality Assurance Specialist

5826 €

QUALITY CONTROL NOTICE

Because of the high levels of PCB's in sample # _________, there is no pesticide spike data available for reporting. The repesence of the PCB's effectively masked that of the spike compounds, preventing accurate quantitation. Duplicate data are available which confirm these results.

RECEIVED OCT 2 5 1983

Both Whitehead MA-/ -1243 Quality Contro Come 1887

CC #6078

The following notice regards CompuChem's current policies concerning the evaluation of TCDD data. Any blanks with surrogate recoveries outside control limits will also be affected by these policies.

(1) We are committed to rerun TCDD fractions if the recovery of the 1,2,3,4 TCDD surrogate drops below contract mandated levels.

Soils 11-128% Waters 26-104%

(2) If a TCDD rerun is required on a specific sample, the preparation process will start:

(a) With a split of the base neutral extract if B/N surrogate recoveries are within contract specified limits.

- (b) With a re-extraction of the original sample if the B/N surrogates are outside of contract specified levels. If the TCDD fraction preceeds the SV fraction through the system, a re-prep should be scheduled due to the low probability of a B/N surrogate failure. If the B/N fraction is then later determined to have bad surrogate recoveries, a full re-extraction can then be performed.
- (3) If a TCDD blank has bad recoveries, the following rules will apply:

 (a) All samples associated with the blank will be run, surrogate recoveries determined and the amount of native TCDD, if any, calculated.
 - (b) If the sample has surrogate recovery within contract specifications and does not have any native material present, it will be reported out with the appropriate QC notice.
 - (c) If, however, either surrogate recovery is out of the acceptable range or native TCDD is identified, the sample must be reprocessed based on the rules identified in point 2.
- (4) If native TCDD is found in the blank the entire batch must be reextracted.
- (5) Based on the rules defined in Point 2, if a group of samples are going to be reprepared from the base/neutral fraction, a new blank will be required. A CompuChem number for this blank can be obtained by using the the number 180 QC counter on the HP3000 system; a 1:20 insertion rate is required. This blank should start with 250 microliters of methylene chloride and follow all of the reprep steps.
- (6) If the second TCDD also fails to produce acceptable results we will invoice the EPA for the re-analysis of a full pesticide/ TCDD fraction.

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Paul Mills Assurance

The statements checked below apply to the pesticide fraction of sample # 5862. These statements apply to problems incurred with the quantitation of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples only) flagged by an asterisk (*) on the compound list. No DBC recovery available due to a _____ dilution factor. No spike recovery available due to a _____ dilution factor. No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds. No DBC recovery due to severe matrix interference. Variations between duplicate samples due to non-homogenous nature of soil sample. No DBC recovery due to _____ dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle). Low/high (circle) spike recoveries due to matrix interference. Additional Analyst/Quality Assurance Specialist comments: initials & date ____9/23/83 QUALITY CONTROL NOTICE Semivolatile sample spike # 5824 and duplicate sample spike # 5825. from the original sample # 5802, required extensive dilutions in order to accurately detect and quantify all compounds present. Because this dilution factor decreased the surrogates and spikes to levels below the detection limit, these compounds are not reported. The acid fractions were diluted by a 20:/ factor, while the base/ neutrals were diluted 20:/ . RECEIVED OCT 2 5 1983

Bob Whitehead My Quality Control Speciali Date: 8-23-83

Case 1887

tatio	The statements checked below apply to the pesticide fraction of sample (SQ > . These statements apply to problems incurred with the quantion of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples) flagged by an asterisk (*) on the compound list.
	No DBC recovery available due to a dilution factor.
	No spike recovery available due to a dilution factor.
	No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
\[\frac{1}{2}\]	No DBC recovery due to severe matrix interference.
	Variations between duplicate samples due to non-homogenous nature of soil sample.
	No DBC recovery due to dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
	Low/high (circle) spike recoveries due to matrix interference.
	Additional Analyst/Quality Assurance Specialist comments:
init	ials
date	- 1 has 12

tati	The statements checked below apply to the pesticide fraction of sample $\frac{r \leq r \leq 1}{r}$. These statements apply to problems incurred with the quantian on of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples) flagged by an asterisk (*) on the compound list.
	No DBC recovery available due to a dilution factor.
	No spike recovery available due to a dilution factor.
	No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
	No DBC recovery due to severe matrix interference.
	Variations between duplicate samples due to non-homogenous nature of soil sample.
	No DBC recovery due to dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
	Low/high (circle) spike recoveries due to matrix interference.
	Additional Analyst/Quality Assurance Specialist comments:
	Summe co-wined high levels of arpshless including
	PCE 1240 Mich inter-cites with OBC.
	ials

tati	The statements checked below apply to the pesticide fraction of sample . These statements apply to problems incurred with the quanti-on of the surrogate, dibutyl chlorendate, or the spike compounds (QC samples) flagged by an asterisk (*) on the compound list.
	No DBC recovery available due to a dilution factor.
	No spike recovery available due to a dilution factor.
	No spike recovery available due to severe matrix interference and/or the presence of high levels of PCBs which prevent quantitation of these compounds.
	No DBC recovery due to severe matrix interference.
	Variations between duplicate samples due to non-homogenous nature of soil sample.
	No DBC recovery due to dilution factor on packed/capillary (circle) and matrix interference on packed/capillary columns (circle).
	Low/high (circle) spike recoveries due to matrix interference.
	Additional Analyst/Quality Assurance Specialist comments:
	ials <u>of</u>
date	1/23/3

CASE NO. 1887 LOW LEVEL WATER	contractor Mend Compu Chem contract No. 68-0 MED. LEVEL SOIL/SED. OTHER (SpecTfy)	<u>1.6762</u> 8/19
QC REPORT NO.		RECEIVED OCT 2 5 1983

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SURR.	EXT.	EXT.	DATE ANA.	ANAL.	cc	SMO Traffic	(#233) D _B	(#247) BFB	(#258) D4-1,2 Dichloro Ethane (NE)	(#447) D5 Nitro Benzene (19~120)	(#448) 2-Fluoro Biphenyl (17-120)	D ₁₀ Pyrene (NE)	(#496) D ₁₄ p-Ter Phenyl (NE)	(#612) D ₅ Phenol (10-100)	(#619) 2-F)uoro Phenol	(#628) 2,4,6- Tribromo Phenol (NE)	(#738) Dibutyl	(#466) 1,2,3,4 TCDO (11-130)
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	g. 63		B 123	7							. `						-	, *

Volatiles:	
Semivolatiles:	
Diovine	

out of 3; outside of QC limits out of 20; outside of QC limits 2 out of 5; outside of QC limits

*Asterisked values are outside of QC limits. NE - Not established.

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	SOIL SURROGATE PERCENT RECOVERY SUMMARY																	
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QC I	EPORT	NO		<del></del> -	<del></del>	r		M 1 A 4 1	,	ır.		Ç.,	uni Valio	ilo	RECEIVI	ED OCT	2 5 198	3
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emivolatiles:	out	of	132;	outside	of I	QC	limits
itoxin:	out.	of	3	outside	of (	QC	limits

*Asterisked values are outside of QC limits.  $\rm NE$  - Not established.

Comments:	
*	5870. INTERFERENCE PRESENT
	5871

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						[	-Volatil	e	][		Se	mi-Volat	ile		]	[Pesticide	][Dioxin]
EXT.	EXT.	DATE	ANAL.	СС	SMO Traffic	(#233) D ₈ Toluene (84-110)	(#247) BFB (NE)	(#258) D4-1,2 Dichloro Ethane (NE)	(#447) U ₅ Nitro Benzene (42-130)	(#448) 2-Fluoro Biphenyl (50-150)	010 Pyrene (NE)	(#496) D ₁₄ p-Ter Phenyl (NE)	05 Phenol (15-90)	(#619) 2-Fluoro Phenol (25-120)	(#628) 2,4,6- Tribromo Phenol (NE)	(#738) Dibutyl Chlor- endate (NE)	(#466) 1,2,3,4 TCDD (26-100)
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Volatiles: Semivolatiles: Dioxin:	out out	of	¥:	outside outside outside	of	QC	limits
vioxin:	out	OT	نسد	outside	ot	ŲĊ	limit

CASE NO. / 521/ LOW LEVEL WATER	CONTRACTOR And Compachem MED. LEVEL SOIL/SED.	CONTRACT NO. CPOP6762 HIGH LEVEL OTHER (Specify)
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SURR.	EXT.	EXT. 1.0.	DATE ANA.	ANAL.	cc	SMO	(#233) D ₈ Toluene (81-120)	BFB	(#258) D4-1,2 Dichloro Ethane (NE)	(#447) D ₅ Nitro Benzene (19-120)	(#448) 2-Fluoro Biphenyl (17-120)	Pyrene	mi-Volat (#496) D ₁ 4 p-Ter Phenyl (NE)	05 Phenol (10-100)	(#619) 2-fluaro Phenal (26-120)	(#628) 2,4,6- Tribrana Phenal (NE)	DIDUCAL	][Dioxin] (#466) 1,2,3,4 TCUD (11-130)
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383	8-7		8-11-83	714	234/2	. 3	90	99	83									

olatiles:	<u>ن</u>	out	of	2;	out s1 de	of	QC	limits
emivolatiles: loxim:		out	of		outside	٥f	QC	limits
IUXIN;		out	OT	نـــــ	outside	or	ЦĊ	limits

*Asterisked values are outside of QC limits. NE - Not established.

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V	ULAI	1115	
RI AGEN	T BI	ANK	SUMMARY

68-01-6762 MEAU CONTRACT NO. __

CASE NO. LOW LEVEL WATER QC REPORT	1397 xx v	CONTRACTOR MEAU SOIL/SED.	CONTRAC HIGH LE OTHER ( UNITS (	VEL SpecTfyT	(8-61-6762 (ug/kg) ug/1		
FRACTION VOLATILES:	CAS# NUMBER	COMPOUND	CONCEN- TRATION	CUNTRACT DETECTION LIMITS	COMMENTS	ASSOCIATE SMO	CC
File 1.0. 6704	75-09-2	Methylene Chande	2.9	2.5	£3801	E 3806	5862-63
Instrument		7751114 500			E 3802	E 3807	5865,5864
1.0.					E3819	E3808	586871
<del>(</del>					E 3305	8.53.65	
VOLATILES:							
File 1.D.		None.				53802	5803
GC 830804A	<u> </u>	10006					5865
1.0.						£3806-01	s 5869-71
VOLATILES:							
File I.D.	05	NONE				£3801	5862
Instrument 1.D. 183080315						63805	. 5868
						23803	
VOLATILES:				<del></del>			
File 1.D.	-					<del></del>	
Instrument I.O.							

# Case 1887

#### REAGENT BEANK SUMMARY

CASE NO. 1887 LOW LEVEL XX		CONTRACTOR MEAD COMPUCHEM MED. LEVEL SOIL/SED.	CONTRACT NO. HIGH LEVEL OTHER (SpecT		6762	RECEIVED OCT 2 5 1983				
QC REPORT	10		UNITS (Circl	CONTRACT		ASSOCIATED			SAMPLES	
FRACTION	CAS# NUMBER	COMPOUND	CONCEN- TRATION	DETECTION LIMITS	COMMENTS	SHO			cc	
SEMT- VOLATILES:							380/		5862-	-586 <b>5</b>
File 1.0.	108-11-2	2-PENTANOL 4 - METHYL-			DURITY 8		802 803		5870-	587/
6078							825	Le 3000	5868-	5869
Instrument 1.D.					<del></del>	F38 E31	908 908	E3806		
					<del> </del>					
					<del></del>	<del></del>				
SEMI- VOLATILES:	<del></del>								<del></del>	
File I.D.									<del></del>	
	**************************************		<del></del>							
Instrument I.D.		· ·								
	·									
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## REAGENT BLANK SUMMARY

CASE NO. LOW LEVEL WATER	1337	CONTRACTOR (CONTRACTOR TO A STATE OF THE SOIL/SED. X	THIGH LEV TOTHER (S	VEL	(ug/kg ) ug/1	RECEIVED OCT 2 5 1983			
QC REP <mark>ORT W</mark>	CAS# NUMBER	COMPOUND		CONTRACT DETECTION		ASSOCIATE SMO		SAMPLES CC	
PESTICIDES:				***			<del></del>		
F11e 1.D.		NONE					£3801	5862-65	
Instrument						£3807	23802	5868-5871	
1.0.						<u>80853</u>	£3803		
				<del></del>			23825		
PESTICIDES:				<u></u>			<u>E3805</u>		
File 1.0.									
Instrument I.D.									
PESTICIDES:									
file I.D.									
Instrument									
								·	
PESTICIDES:									
File 1.D.									
Instrument 1.D.					Name of the last o				
<del></del>				<del></del>			<del></del> .		

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# TCDD REAGENT BLANK SUMMARY

Page __ of __

CASE NO. 1887  LON LEVEL XX  MATER  SOIL/SED. XX			HIGH LE OTHER (	VEL SpecTfy)	8-01-6/62		
FRACTION :	CAS# NUMBER	COMPOUND	CONCEN- TRATION	CONTRACT DETECTION LIMITS	Ug/kg Ug/1 COMMENTS	ASSOCIATE SMO	D SAMPLES CC
File J.D. 6078		NONE			b'/. RECOVERY	E3803	5 <u>862</u> - 5865
Instrument I.D.						E3825 F3805 E3806 E3807 E3808	
TCDD:		,					
Instrument I.D.							
TCDD :							
File 1.0.							
Instrument 1.0.							
TCDO :							
File 1.D.  Instrument							
1.0.							

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<b>6/83</b>	82

			5827R	5826K				5825	5824					9000	1 285 t					) • 40 y	5022					
RPO: VOAS B/N ACID PEST	*Asterisked values		MS0 1e3285	NS 16 3785	E 3785	7000	PESI	NSU 653785	NS 1=3785	E3785	- C85	<b>X</b> 10		HSD AE3785	NS 163785		E 3785	7 00 P	B/N	MSD AE3Z/v	MS 163796	E37%	) OFS	VOA	FRACTION	CASE NO. LOW LEVEL XX WATER QC REPORT NO.
2 out of 2; outside QC 2 out of 2; outside QC 2 out of 2; outside QC	are outside QC	P.P-00T	Endrin	Dieldrin	Aldrin	Heptachlor	Lindane	4-Nitrophenol	P-Chloro-M-Cresol	2-Chlorophenol	Phenol	Pentachlorophenol	1,4-Dichlorobenzene	N-Nitrosodi-N-Propylamine	Pyrene	Di-N-Butylphthalate	2_4-Dinitrotoluene	Acenaphthene	richlorobenzene	Benzene		Chlorobenzene	Trichloroethylene	1,1-Dichloroethylene	COMPOUND	XX (88) CONTRACTOR MED. 14 VEL SOIL/SED.
Climits Climits Climits	limits.		1	1	1	1	1	ટ	3	E	E	ਵ	3	S	ξ	ટ	B	N D	120,000	8	<b>3</b>	8	₹9	QV)	CONC #	TUR MEAD WEL XX
REC		80	80	80	80	80	80	12000	2000	2000	2000	2000	2000	8000	2000	2000	2000	2000	2000	12.5	12.5	12.5	12.5	12.5	CONC. SPIKE	D COMPUCHEM
RECOVERY: 1		1	1	1	,	1	,	,	1	1	1	١	7.7	1	1	1	1	,	27,000	13	19	14	9	13	CONC.	
WOAS PEST 12			ı	ı	1	1	1												0	104	121	112	72*	104	ÆC.	CONTRACT NO. E HIGH LEVEL OTHER (Specify) UNITS (Circle)
out out out		1	1	1	!	1		1	1	1	1	1	E	1		1	i	1	140,000	12	17	12	8.2	12	MSD.	
00 /C: 00 00 /C: 00 00 00 00 00 00 00 00 00 00 00 00 00		1	1	1	J	;	1	)	,		1			1	1	1	1	1	E	76	3%	36	66 2	36	REC.	68-01-6
outside outside outside		ı	ì	ı	1	1	I	1	1	1	1	1	1	١	1	,	1	1	E	8	15	15	9	8	RPD	16762
QC limits QC limits QC limits QC limits		<40%	âg.	<40%	40%	<b>401</b>	401	<b>40</b> %	<b>ć403</b>	<b>401</b>	â	401	\$03	\$03	\$03	<b>\$03</b>	\$03	\$03	\$0%	<15%	<15%	<151	£15%	<151	<b>2</b> 2	7
		82-100	89-110	56-120	45-110	43-120	87-110	15-90	32-110	33-110	23-80	19-120	33-110	34-110	25-140	13-110	43-110	57-120	38-110	56-130	58-130	67-130	74-130	51-150	RECOVERY	
*Date Limits Set 12/82				5868-5871	5862-63,	NOTICE	SEE Q.A.				5868-5871	5862-5865				@ Som JA Notice		5871	5862 -5865		11-8185	5862-63, 5865,			COMMENTS	

CASE NO.
LUM LEVEL
MATER
QC REPORT NO.

197

CONTRACT NO. 68-01-6763-D/fin 1/61

COMPOUND         SHO # CONC. SPIKE CONC. ** CONC. **         X CONC. ** </th
CONC. SPIKE CONC. X CONC. ADDED MS NEC . MSD 25 21 84 21 25 22 88 22 25 22 98 22 25 20 90 20
CONC. X CONC.  MS REC . MSD  21 84 21  22 88 22  22 98 22  20 90 20
CONC. NSD NSD 27 27 22 22 22 20 220
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VOLATILE	INSTRUMENT	TUNE	AND	PERFORMANCE

	NO. 1801 CONTRACTOR Mead C	ompuChem	HIGH LEV		6762
WATER		<del></del>		Specify)	
D	ate: 8/4/87 BFB File Name:Shift:	BF\$30604C0	5 Analyst	:: 714	· · · · · · · · · · · · · · · · · · ·
Mass	BFB Ion Abundance Criteria		% Relat	tive Abundan	ce
50	15 - 40 percent of mass 95	16	<u> </u>		
75	30 - 60 percent of mass 95	38			
<b>9</b> 5	base peak, 100 percent	100			
96	5 - 9 percent of mass 95	6,7			
173	less than 2 percent of mass 174	0			
174	greater than 50 percent of mass 95	85			**************************************
175	5 - 9 percent of mass 194	4.6		(	5,4 )1
176	greater than 95 percent, but less than 101 percent of 174	81			
177	5 - 9 percent of mass 176	4,4		(	5.5 ) ²
BFB	Performance Results:  The BFB performance results were criteria.	reviewed and	found to I	be within th	e <b>specifie</b> d
	·	Initials		D	ate
	Deviations Date/Time/Instrument File Number	Compound	m/z	Required Abundance	Observed Abundance
Comme	nts:	Init	ials	D	ate
many		<del></del>	<del></del>		· · · · · · · · · · · · · · · · · · ·
	ue in ( ) is % of mass 174 ue in ( ) is % of mass 176		RECEIVI	ED 0CT 2 5	1983
- 41					

# VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE LOW L		ompuChem	HIGH LE		6762
WATER	SOIL/SED.		OTHER (	Specify)	
D	ate: <u>8/4/83</u> BFB File Name: <u>F</u>	3F830804A0	Analys	it: <u>633</u>	
Mass	BFB Ion Abundance Criteria		% Rela	: itive Abundan	ce
50	15 - 40 percent of mass 95		21		
75	30 - 60 percent of mass 95		40	·	
<b>9</b> 5	base peak, 100 percent		100		
96	5 - 9 percent of mass 95		8.0	0	
173	less than 2 percent of mass 174		42	%	
174	greater than 50 percent of mass 95			, 0	
175	5 - 9 percent of mass 194		<u>S.</u> ,	2 (	6.0 1
176	greater than 95 percent, but less than 101 percent of 174		85		
177	5 - 9 percent of mass 176	<del></del>	4	6 (	5,4 12
BFB	Performance Results:	<del></del>	<del></del>	<del></del>	
	The BFB performance results were criteria.	reviewed and	found to	be within th	ne specified
	•	Initials		τ.	Date
	Deviations Date/Time/Instrument File Number	Compound	m/z	Required Abundance	Observed Abundance
Comme	nts:	Init	ials		Date
	· · · · · · · · · · · · · · · · · · ·				
1 Val	ue in ( ) is % of mass 174		RECE	EIVED OCT 2	5 1983
2 Val	ue in ( ) is % of mass 176		,,,_		

FORM VII

Revision Date 7/83 JRT

# VOLATILE INSTRUMENT TUNE AND PERFORMANCE

CASE	NO. 1857 CONTRACTOR Mead C	ompuChem CONTRACT N	0. <u>68-01-6762</u>
LOW L	EVEL MED. LEVEL SOIL/SED.	HIGH LEVEL OTHER (Spe	3701
MAIER	3011/350.	OTHER (Spec	
D	BFB File Name: ate: 8/10/83 Shift:3	BF830810B13 3 Analyst:_	8/10/83
Mass	BFB Ion Abundance Criteria	% Relativ	e Abundance
50	15 - 40 percent of mass 95	15.28	
75	30 - 60 percent of mass 95	37.21	
<b>9</b> 5	base peak, 100 percent	100	
96	5 - 9 percent of mass 95	8.98	
173	less than 2 percent of mass 174		
174	greater than 50 percent of mass 95	79.28	
175	5 - 9 percent of mass 194	6.80	(8.58)1_
176	greater than 95 percent, but less than 101 percent of 174	75.76	
177	5 - 9 percent of mass 176	6.92	( 9.13 )2
BFB	Performance Results:		
	<del></del>		debin the anneities
	The BFB performance results were criteria.	reviewed and found to be	·
		cac	8/10/83 Date
	•	Initials	Date
	Deviations Date/Time/Instrument File Number	Compound m/z Ab	quired Observed undance Abundance
		Initials	Date
Comme	nts:		
	<u> </u>		
1 Val	ue in ( ) is % of mass 174		
	•	RECEN	/ED OCT 2 5 1983 :
<pre>4 Val</pre>	ue in ( ) is % of mass 176		

FORM VII

Revision Date 7/83 JRT

CASE LOW L WATER	NO. CONTRACTOR Mead CONTRACTOR	ompuChem	CONTRAC HIGH LI	CT NO. 68-01-	
D	DFTPP File Name:ate:Shift:	DH830211 A A	Analy:	st: <u>65</u>	9
Mass	DFTPP Ion Abundance Criteria		% Rela	ative Abundan	ce
51	30 - 60 percent of mass 198	47.41			
68	less than 2 percent of mass 69				
70	less than 2 percent of mass 69		<del></del>		
127	40 - 60 percent of mass 198	39.75			
197	less than 1 percent of mass 198			· · · · · · · · · · · · · · · · · · ·	
198	base peak, 100 percent	100.00			
199	5 - 9 per cent of mass 198	7.8/			
275	10 - 30 percent of mass 198	20.95			
<b>3</b> 65	greater than 1 percent of mass 198	1.79	· <u>-</u>		
441	present but less mass than 443	10.50		·	·
442	greater than 40 percent of mass 198	94.43	<del></del>		
443	17 - 23 percent of mass 442	16.07			( 17 .)*
DFTP	P and BFB Performance Results:	·····		<del> </del>	· <del>- • • • • • • • • • • • • • • • • • • </del>
	The DFTPP performance results were criteria.				
		BP Initia	ils	<i>§</i> ,	////83
	Deviations Date/Time/Instrument File Number	Compound	m/z	Required Abundance	Observed Abundance
			34331		

	40	Area 266	
Pentachlorophenol Response Factor =	Area 188 X	Area 266 50 =	0.7
Benzidine Detectable 4 Yes	No		
Area (Counts) 40 ng D10 Anthracene =	46655	1.0-	
Di-N-Butyl Phthalate Saturated TY	es N	) <b>'R</b> (	ECEIVED OCT 2 5 198

Comments:

^{*} Figure in ( ) is % of mass 442

EMI-	VOLATI	LE	INSTRUMENT	TUNE	AND	PERFORMANC

CASE		ompuChem	CONTRACT NO. 68-01	1-6762
LOW L	EVEL MED. LEVEL		HIGH LEVEL OTHER (Specify)	
WATER			Oluck (Shecily)	
D	DFTPP File Name:ate:Shift:	DHB30E12 A.	Analyst: 65	1
Mass	DFTPP Ion Abundance Criteria		% Relative Abunda	
51	30 - 60 percent of mass 198	48.24		
68	less than 2 percent of mass 69			
70	less than 2 percent of mass 69			
127	40 - 60 percent of mass 198	57.19		
197	less than 1 percent of mass 198			
198	base peak, 100 percent	100.00		
199	5 - 9 per cent of mass 198	6.00	· · · · · · · · · · · · · · · · · · ·	
275	10 - 30 percent of mass 198	20-01		
365	greater than 1 percent of mass 198	3.41		
441	present but less mass than 443	10.08		
442	greater than 40 percent of mass 198	62.46	<del></del>	
443	17 - 23 percent of mass 442	12.5 1		(20.)*
DFTP	P and BFB Performance Results:	<del></del>	<del></del>	
	The DFTPP performance results wer	e reviewed an	d found to be within	n the specified
	criteria.	BP	2	3/17/03
		Initials		Date
	Deviations Date/Time/Instrument File Number	Compound	Required M/z Abundance	Observed Abundance
		-		
		-		_
		Init	ials	Date
Comme				
Pent a	chlorophenol Response Factor = Area		0.2	
Benzi	dine Detectable Yes No			· · · · ·
Area	(Counts) 40 ng D10 Anthracene = $579$ ; Butyl Phthalate Saturated $\square$ Yes	38 No	RECEIVED 0	77 2 5 1983
	ure in ( ) is % of mass 442	,		
•		M VII		a ann gr
				C F

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SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMAN	SEMI-VOLATILE	INSTRUMENT	TUNE AND	PERFORMANC
---------------------------------------------	---------------	------------	----------	------------

CASE	NO. CONTRACTOR Mead C	ompuChem	HIGH LEV	r NO. <u>68-01-6</u> VEL	
WATER	EVEL MED. LEVEL SOIL/SED.		OTHER (	Specify)	
D	DFTPP File Name: Aate: 8:20-83 Shift:	N 3 3 0 3 20 A	Analysi	: <u>602</u>	
Mass	DFTPP Ion Abundance Criteria		% Relat	tive Abundano	<u>:e</u>
51	30 - 60 percent of mass 198	57º/0			
<u>68</u>	less than 2 percent of mass 69	00/0			
70	less than 2 percent of mass 69	< 20/8		<del></del>	
127	40 - 60 percent of mass 198	470/0.		<del></del>	
197	less than 1 percent of mass 198	0%			
198	base peak, 100 percent	1000/0			
199	5 - 9 per cent of mass 198	80/0	··-		<del></del>
275	10 - 30 percent of mass 198	15.10		<del> </del>	
<b>3</b> 65	greater than 1 percent of mass 198				
441	present but less mass than 443	7°/0			····
442	greater than 40 percent of mass 198				
443	17 - 23 percent of mass 442	9°/.		· · · · · · · · · · · · · · · · · · ·	( 220/0 )*
DFTP	P and BFB Performance Results:				<del> </del>
	The DFTPP performance results wer criteria.	e reviewed a	nd found to	o be within t	the specified
1		Initial	S	D	ate
	Deviations Date/Time/Instrument File Number	Compound	m/z	Required Abundance	Observed Abundance
			<del></del>		
			<del></del>		
	•	Ini	tials		Date
Comme			266	7	
Benzi Area	thlorophenol Response Factor = Area dine Detectable   X  Yes   No   No   Counts   40 ng D10 Anthracene = 9435   Butyl Phthalate Saturated   Yes			LIVED OCT 2	5 1983
* Fig	ure in ( ) is % of mass 442				

	SEMI-VULATILE IN	SIKUMENI TUNE	AND PERFURFANCE	
CASE	NO. CONTRACTOR Mead Co	ompuChem	CONTRACT NO. 68-	01-6762
WATER	EVEL MED. LEVEL SOIL/SED.		HIGH LEVEL OTHER (Specify)	
D	DFTPP File Name: Shift:	DH 83082461	Analyst:	
1	DFTPP			
Mass	Ion Abundance Criteria		% Relative Abun	dance
51	30 - 60 percent of mass 198	50	····	
68	less than 2 percent of mass 69	<u> </u>		
70	less than 2 percent of mass 69	42		
127	40 - 60 percent of mass 198	46.		
197	less than 1 percent of mass 198	41		
198	base peak, 100 percent	IDP		
199	5 - 9 per cent of mass 198			
275	10 - 30 percent of mass 198	18		
365	greater than 1 percent of mass 198		••	
441	present but less mass than 443	L443		
442	greater than 40 percent of mass 198	740		
443	17 - 23 percent of mass 442	10.55		( 19 )*
DFTP	P, and BFB Performance Results:			
X	The DFTPP performance results were criteria.	e reviewed and	d found to be with $ otin \mathcal{L} $	in the specified
		Initials		Date
	Deviations Date/Time/Instrument File Number	Compound	Required m/z Abundanc	
	•			
		Init	ials	Date
			<del></del>	

Comments:

Pentachlorophenol Response Factor = 40 Area 266

Benzidine Detectable Yes No

Area (Counts) 40 ng D10 Anthracene = 4621

Di-N-Butyl Phthalate Saturated Yes No RECEIVED OCT 2 5 1983

* Figure in ( ) is % of mass 442

LOW LEVEL CONTRACTOR Mead C MED. LEVEL WATER SOIL/SED.		ompuChem	CONTRACT NO.		
WATERSOIL/SED				y)	
	ate: 8/24/83 DFTPP File Name:	UHB30824A	Analyst:	659	
Mass	DFTPP Ion Abundance Criteria		% Relative A	bundance	
51	30 - 60 percent of mass 198	56.98			
68	less than 2 percent of mass 69				
70	less than 2 percent of mass 69				
127	40 - 60 percent of mass 198	54.83			
197	less than 1 percent of mass 198	•			
198	base peak, 100 percent	100.00			
199	5 - 9 per cent of mass 198	5.07			
275	10 - 30 percent of mass 198	22.94			
365	greater than 1 percent of mass 198	2.20			
441	present but less mass than 443	8.99			
442	greater than 40 percent of mass 198	71.22			
443	17 - 23 percent of mass 442	15.30		( 2/ .)*	
DFTP	P and BFB Performance Results:				
	<del></del>	e reviewed and	d found to be w	ithin the specified	
	criteria.	BP		0/29/93	
		Initials		Date	
	Deviations Date/Time/Instrument File Number	Compound	Requi m/z Abund		
		· **********			
1		Init	ials	Date	
Comments:					
Pentachlorophenol Response Factor = Area 188 X 50 = 0.07					
Benzidine Detectable 4 Yes No Area (Counts) 40 ng D10 Anthracene = 68823					
_	Butyl Phthalate Saturated TYes	No	RECEIVE	D OCT 2 5 1983	
Figure in ( ) is % of mass 442					

CASE NO. 1997 CONTRACTOR Mead Compuch			hem			
LOW LEVEL MED. LEVEL			HIGH LI			
WATER	SOIL/SED.		OTHER	(Specify)		
	APTAN PALA NAME OF	11/ Ca 2 ~ 73 ~	000			
	DFTPP File Name: 3 ate: 8-27-03 Shift:	47:520 B	20016	st: 616		
U	ste: <u>6.2/-63</u> silit:		, MIGITS			
(	DFTPP	1	•			
Mass	Ion Abundance Criteria	٠.	% Reli	ative Abundan	ce	
			<del></del>		-	
51	30 - 60 percent of mass 198	55				
		<b>42</b>				
68	less than 2 percent of mass 69					
70	less than 2 percent of mass 69	L2				
			·			
127	40 - 60 percent of mass 198	57				
197	less than 1 percent of mass 198	41				
198	base peak, 100 percent	194				
730	base peak, 100 percent	174				
199	5 - 9 per cent of mass 198	7				
		- 11	<del></del>			
275	10 - 30 percent of mass 198	24				
		71				
365	greater than 1 percent of mass 198		_ ' \			
441	present but less mass than 443	L443				
	present but less mass than 445	<del></del>				
442	greater than 40 percent of mass 198	740				
		16.8	0			
443	17 - 23 percent of mass 442	\$ 6.0	0		(22)+	
1 DETA	December 1					
DETE	P and BFB Performance Results:					
	The DFTPP performance results wer	e reviewed an	d found 1	to be within	the specified	
1-40	criteria.			•	15 5	
İ		- Cur	<u> </u>	4	12/	
j		Initials		D	ate	
ļ	1 Davidation			Paged and	Observed	
	<pre>Deviations Date/lime/Instrument File Number</pre>	Compound	m/z	Required Abundance	Abundance	
l	Date/11me/11/strument 11/e Number	Compound	111/2	Applicative	ADDITIONICE	
ł					_	
]		•		<del></del>		
1						
l .					•	
		Init	1512		Date	
Comme	nts:	11110	1013		Dare	
Comments:						
Penta	chlorophenol Response Factor = Area		- 10)	なれて		
Benzidine Detectable Yes No						
Area	(Counts) 40 ng DIO Anthracene =		+2		n E 4002	
D1-N-	Butyl Phthalate Saturated   Yes	区 No	RE	CEIVED OCT	S 3 Pers	
•						
- Fig	Figure in ( ) is % of mass 442					

# SEMI-VOLATILE INSTRUMENT TUNE AND PERFORMANCE

RE Will Ter	NO. 1837 CONTRACTOR Mead Come Med. Level Soil/sed.		CONTRACT NO. <u>68-0</u> HIGH LEVEL OTHER (Specify) _	
	DFTPP File Name: Date: 9-15-7: Shift:			
<u>₹85</u>	DFTPP Ion Abundance Criteria		% Relative Abund	ance
51	30 - 60 percent of mass 198	4.1		
68	less than 2 percent of mass 69			
70	less than 2 percent of mass 69			
1 27	40 - 60 percent of mass 198	= 1		
197	less than 1 percent of mass 198			
, <del>4</del> 8	base peak, 100 percent			
(39	5 - 9 per cent of mass 198	/		
2 75	10 - 30 percent of mass 198			
365	greater than 1 percent of mass 198	<b>~</b> .		
441	present but less mass than 443	(	? <i>S</i>	
412	greater than 40 percent of mass 198	43.	7 <i>[</i>	
413	17 - 23 percent of mass 442	د سره		( 175)*
FTP	P and BFB Performance Results:			
	The DFTPP performance results were criteria.	e reviewed and	found to be withi	n the specified
		Initials		Date
	Deviations Date/Time/Instrument File Number	Compound	Required M/z Abundance	Observed Abundance
			<del></del>	
		Initia	1s	Date
omme	nts:			
enzi rea i-N-	chlorophenol Response Factor = Area dine Detectable  Yes  No (Counts) 40 ng D10 Anthracene = Butyl Phthalate Saturated Yes ure in ( ) is % of mass 442		RECEIVED OCT	2 5 198 <b>3</b>

SEMI-VOLATILE	INSTRUMENT	TUNE AND	PERFORMANCE
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	EVEL MED. LEVEL		HIGH LEVE	NO. <u>68-01-</u> ( L ec <del>ify)</del>		
WATER	DFTPP File Name: ate: 8-10-33 Shift:		· .	723		
Mass	DFTPP Ion Abundance Criteria		% Relati	ve Abundan	ce	
<u>51</u> 68	30 - 60 percent of mass 198  less than 2 percent of mass 69	57%				
70	less than 2 percent of mass 69	< .190				
127	40 - 60 percent of mass 198	47%				
197	less than 1 percent of mass 198	0.3%				
198	base peak, 100 percent	100%				
199	5 - 9 per cent of mass 198	6.7%				
275	10 - 30 percent of mass 198	22%	<del></del>			
365	greater than 1 percent of mass 19	2.0%	_ · <u></u>	~		
441	present but less mass than 443	13%		<del>-</del>		
442	greater than 40 percent of mass 1	.98 9a%		<del>-</del>		
443	17 - 23 percent of mass 442	17%			( 18.8%)*	
DFTPP and BFB Performance Results:  The DFTPP performance results were reviewed and found to be within the specified criteria.						
	Deviations Date/Time/Instrument File Numb	Initials  oer Compound	R	D equired bundance	Observed Abundance	
		Init	1als		Date	
Pentachlorophenol Response Factor = Area 188 x 50 = 15  Benzidine Detectable Yes No Area (Counts) 40 ng D10 Anthracene = 89308 Di-N-Butyl Phthalate Saturated Yes No RECEIVED OCT 2 5 1983						